COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

The Berkshire Gas Company	)))	D.T.E. 02-17

INITIAL BRIEF OF
THE BERKSHIRE GAS COMPANY

I. PROCEDURAL HISTORY

On March 15, 2002, in accordance with G.L. c. 164, §69I, The Berkshire Gas Company ("Berkshire" or the "Company") filed with the Department of Telecommunications and Energy (the "Department") its Forecast and Supply Plan for the five-year forecasting period of November 1, 2001 through October 31, 2006 (the "Forecast and Supply Plan" or the "F&SP").[1]

Pursuant to its duly published notice, the Department conducted a public hearing at its offices on May 6, 2002. The Department allowed the Motion to Intervene submitted by the Division of Energy Resources ("DOER") dated April 25, 2002.[2] The Attorney General of the Commonwealth of Massachusetts (the "Attorney General") filed a Notice of Intervention pursuant to G.L. c. 12, §11E dated May 3, 2002. The Department conducted an evidentiary hearing on August 13, 2002 at the Department's offices.

At the evidentiary hearing, the Company presented three witnesses: Karen L. Zink, Vice President of the Company, who testified on the Company's forecasting and resource planning procedures; William L. Barschdorf, Jr., Supervisor of Gas Supply

[1] Pursuant to the request of the Hearing Officer, the Company later submitted forecast data for the split year 2006 - 2007. Exh. BG-16.

[2] The DOER later advised the Hearing Officer and the parties that it did not intend to participate in evidentiary hearing. E-mail of C. Wasserman, Deputy General Counsel, DOER, dated August 9, 2002.

Planning of the Company, who provided testimony with respect to the Company's resource planning activities; and Michael Marks, Senior Vice President of Applied Energy Group ("AEG"), who testified with respect to the Company's demand forecast. Exh. DTE 1-41; Exh. DTE 1-58. In addition to the sworn testimony presented at the hearing, the evidentiary record consists of approximately 170 exhibits, including the Company's initial filing and supporting documentation. The evidentiary record also includes the Company's responses to Information and Record Requests issued by the Department. This evidentiary record demonstrates that the Forecast and Supply Plan ensures that a necessary energy supply for Berkshire's customers will be available with a minimum impact on the environment at the lowest possible cost.

The Company's Initial Brief is submitted in accordance with the procedural scheduled established by the Hearing Officer.

II. BACKGROUND ON THE COMPANY

The Company provides natural gas sales and distribution services to residential and commercial and industrial ("C&I") customers in 20 communities in western Massachusetts. The Company serves over 34,000 customers and the population of the Company's service area is estimated to be 190,000. Exh. BG-1, p. 5; Exh. DTE 1-6.

Berkshire's most recent Forecast and Supply Plan was submitted to the Department on October 1, 1998 and the Department's review of such filing was docketed as D.T.E. 98-99. Exh. BG-1, p. 1. In an Order dated August 27, 1999, the Department approved such Forecast and Supply Plan. Subsequent to that Order, Berkshire has continued to implement a wide range of measures to enhance its planning process and to respond to corporate opportunities taking place as a result of developments in the natural gas industry. Perhaps the most significant development

was that on September 1, 2000, the Company became a subsidiary of Energy East Corporation ("EEC" or "Energy East"). As noted in the record, Energy East is committed to providing excellent customer service. The Company expects to continue to secure benefits for its customers by combining Berkshire's local knowledge and long history of successful service with Energy East's more significant resources. Exh. BG-1, p. 2; Exh. DTE 1-59. Berkshire has worked aggressively to identify opportunities created by the merger with Energy East in order to secure gas cost savings for the benefit of customers. See, e.g. The Berkshire Gas Company, D.T.E. 01-41 (2001); The Berkshire Gas Company, D.T.E. 02-19 (2002).

The Company's forecast was based upon an enhanced econometric methodology developed and applied by Mr. Marks and AEG in collaboration with planning experts within the Company. Exh. BG-2; Exh. BG-3. In addition, the Company has developed separate sales and transportation forecasts so as to be able to assess and plan for the affects of customer migration to transportation service. Exh. BG-1, p. 12. The Company maintained its established and approved design standards while indicating that the Company intended to consider updating its weather analysis, most likely in connection with the preparation of the Company's next Forecast and Supply Plan. The Company's filing demonstrates that, over the forecast period, the Company has planned for adequate resources to meet the demands of firm customers under normal and design conditions. Importantly, the capability is largely the result of the flexible and responsive resource portfolio maintained by the Company.

III. METHODOLOGY FOR FORECASTING SENDOUT REQUIREMENTS

A. Overview of Forecasting Methodology

The Company has substantially enhanced its forecasting methodology. First, the Company developed "segmented" forecasts of "Firm Sales" and "Firm Throughput." Exh. BG-1, p. 12. The Company determined that these distinctive forecasts are necessary "to ensure a proper forecast for upstream capacity and supply resources (firm sales service only) as well as downstream capacity for system needs during peak periods (both sales and transportation service)." Id. This enhancement enables the Company to respond to changing market conditions ("migration" and "reverse migration") and also responds to the Department's specific directive to provide a forecast of customers migrating to transportation service. Berkshire Gas, D.T.E. 98-99, p. 22; see also Exh. BG-1, pp. 27-30.

Second, the Company employed new and sophisticated econometric modeling technologies to forecast growth for each of its customer classes for both sales and growth. The Company retained AEG to assist in this effort and relied upon well-established, flexible models. Exh. BG-2, p. 9; Tr. 14. The decision to develop an enhanced forecasting model reflected the Company's commitment to improving its planning process as well as a substantial response to the directives of the Department. Specifically, in Berkshire Gas, D.T.E. 98-99 the Department directed the Company to use a more "theoretically well-founded forecasting technique" in this proceeding. Berkshire Gas, D.T.E. 98-99 pp. 19-22. The Company's econometric model, in fact, applied a sophisticated and theoretically sound forecasting technique and relied upon a variety of exogenous variables such as weather, customer levels, pricing and the availability of alternative fuels, market area personal income and employment, retail sales and the demand for and pricing of natural gas. Exh. BG-1, p. 12; Tr. 14. The

Company's "Econometric Forecast" and related workpapers describe and provide the necessary background with respect to the Company's forecasting methodology. Exh. BG-2; Exh. BG-3.

B. Standard of Review

Pursuant to G.L. c. 164, §69I, the Department reviews a gas company's sendout forecast to ensure that the forecast accurately projects the sendout requirements of the utility's market area. Berkshire Gas, D.T.E. 98-99, p. 2; Boston Gas Company, D.T.E. 97-81, pp. 2-3 (2000). The Department's regulations and precedent require that the forecast reflect accurate and complete historical data as well as reasonable statistical projection methods. Id. citing 980 C.M.R. 7.02(9)(b).

The Department evaluates the reasonableness of a projection method based upon whether the methodology is (a) reviewable, (b) appropriate and (c) reliable. Berkshire Gas, D.T.E. 98-99, p. 3. A forecast is reliable if it "contains enough information to allow a full understanding of the forecast methodology." A forecast is appropriate if the methodology is "technically suitable to the size and nature of the particular gas company." A forecast is reliable if the methodology "provides a measure of confidence that its data, assumptions and judgments produce a forecast of what is most likely to occur." Id.; Colonial Gas Company, D.P.U. 96-18, p. 5. (1996); Bay State Gas Company, D.P.U. 93-129, p. 5 (1996). As described below, the Company has demonstrated that its sales and sendout forecast methodology is reviewable, appropriate and reliable.

C. Berkshire's Forecast Methodology is Reviewable, Appropriate and Reliable

The Company developed rate class-based forecasts of firm sales and total throughput. Exh. BG-2, p. 4. The Company explained that this approach was taken as

it was possible "to obtain accurate historical data sets for each rate class." Id. In fact, the Company employed the maximum amount of available historical rate class sales data, namely 8 years. Id. at 5; Tr. 18; Exh. DTE 1-4. Mr. Marks' analysis concluded that the "historical data sets provided a credible history upon which to forecast future trend in gas sales." Exh. BG-2, p. 5. These data sets also supported the various statistical techniques utilized for forecasting, such as regression analysis and exponential smoothing. All models were structured with monthly data series. Id.

The Company next collected the substantial data that would be necessary to apply the models. A wide range of data was collected for the eight-year historical period applied in the model, including firm sales and throughput by rate class, customer counts by rate class, prices for competing fuels, adjusted degree days, regional indicators of economic growth and viability, regional demographic data and savings estimates from the Company's successful conservation programs. Exh. DTE 1-5. Substantial economic and demographic data (and projections) were obtained from Economy.com, a comprehensive source for professional economic research. Exh. BG-2, p. 10, n. 1. The technical data collected and relied upon were provided in Exhibit B-3. The Company next developed specific forecast models by applying well-accepted econometric analyses. Regression analysis was the first choice, but when necessary other techniques were applied. Exh. BG-2, p. 9; Tr. 12. Forecasts were based upon sequential time series data. Tr. 12-13. The data suggested particular statistical models as it was seasonal (or weather sensitive) and contained statistically identifiable trends. Exh. BG-2, p. 9; Exh. DTE 1-10.

AEG employed a well-known software package, Forecast Pro for Windows. This software was originally developed through the Electric Power Research Institute and has been relied upon in numerous utility forecast analyses. The model contained a

number of attractive features, including a built-in "expert system" (that suggested the appropriate technique) as well as testing procedures. AEG provided the results and the evaluation data for each of its models, that is an "analysis of the reasonableness of the forecast generated by the models." Exh. BG-2, p. 11.

First, sales models were developed for each class and then total throughput models. Transportation forecasts were derived by specifying the differences between the results of the two analyses for each C&I rate class. Exh. B-2, p. 52. Importantly, forecasted results were compared to historical results to assess the validity of the Company's forecast. Exh. BG-2, pp. 8-9.

The Company developed a sensitivity analysis, or design year forecast, by assuming extreme weather conditions. The company conducted an extensive weather analysis of 40 years' of actual weather data to derive a design year. In order to compare the design year, a series of monthly adjustment factors for heating degree days were developed. Exh. BG-2; p. 53. These factors were based upon the ratio of design and normal years from the Company's weather data. Id. This resulted in billing cycle adjusted design year series for each rate class.

A design day forecast was developed by first performing a regression analysis of daily system sendout and heating degree days. March and December were also tested to account for differences in sensitivity to weather based upon the time of the year, i.e., early winter versus late winter. Id. at 55. Individual models were performed for the four most recent split years. Next, AEG sought to solve each regression model for the five coldest days in each year. Third, AEG solved a regression for the 75 degree day design day. Finally, AEG computed the average of the four design day estimates, namely 53,502 Mcf. Id. at 57. The remaining years of the forecast period were

estimated by applying the growth rates from the total throughput heating season forecast.

In summary, the Company's forecasting methodology fully satisfies the Department standards. First, the forecast is easily reviewable. The AEG narrative fully and clearly describes the forecasting approach employed in the Forecast and Supply Plan and provides the results of the various regression analyses performed and well as plotting historical and forecasted results. A complete compilation of workpapers was also presented. Exh. BG-3. The forecast employing econometric techniques is appropriate and fully consistent with the types of models presented to and accepted by the Department in other forecast proceedings. Berkshire Gas, D.T.E. 98-99, pp. 19-20. Finally, the Company's forecast was reliable as indicated by the regression statistical results and the Company's extensive comparative analysis. See e.g. Exh. BG-1, pp. 30-31. As Mr. Marks explained, the Company's forecast "was reliable based upon the various measures of statistical accuracy, which indicated high percentages of dependent-variable variation being captured by the different models." Tr. 14. Mr. Marks also explained that "graphically, each of the forecasts exhibited both logical and explainable projections of future sales" for each class of customers. Id. Accordingly, the Department should find that the Company's forecast methodology satisfied the requirements of relevant Department precedent and directives.

IV. DEVELOPMENT OF PLANNING STANDARDS

A. Introduction

The Company's normal year planning standard is calculated based upon the mathematical average of the total degree-days by month for the most recent 20-year period. This resulted in a normal year standard of 7,057 degree days. Exh. BG-1, p. 33.

In addition, the Company employed a design day standard of 75 degree days with 76 degree days used for possible contingency analysis. The Company's design day standard reflected a probability of occurrence of once in 20 years. The Company's weather study had determined that a 75.7 degree day was suggested with a probability of occurrence of once in 30 years. Exh. BG-1, p. 34; Exh. BG-4, p. 8. The Company's design year standard of 8,194 degree days similarly derived from its weather study reflects a probability of occurrence of once in 30 years. Finally, Berkshire continued to employ a cold snap standard of 620 degree days based upon a once in 30 year standard. Exh. BG-1, p. 39; Exh. BG-4, p. 10.

The Company explained that it maintained these planning standards based upon its earlier weather analysis. Exh. BG-1, pp. 31-32. These standards had been accepted by the Department in Berkshire Gas, D.T.E. 98-99. As the Company explained, the planning standards were obtained from a comprehensive weather study conducted by Management Applications Consulting, Inc. ("MAC"). Exh. BG-4. The Company explained that the MAC weather study applied appropriate data and sound statistical techniques to derive the design standards. Exh. BG-1, p. 31. Again, the use of these standards was approved by the Department in the Company's most recent forecast review. Berkshire Gas, D.T.E. 98-99.

The Company explained that it analyzed incurring the costs associated with updating its weather study for purposes of the filing being reviewed in this proceeding. The Company considered several factors in determining that it was appropriate to defer such expense. First, the Company recognized that it would be incurring substantial costs in developing its econometric model. Second, the company recognized that recent experience confirmed the continuing validity of the Company's design experience as well as the standards of other regional utilities. Exh. BG-1, p. 33; Exh. BG-5; Exh.

DTE 1-45. Indeed, the Company has recently experienced a design day and cold snap at or near the established standard. Id. Most importantly, the Company recognized that it maintains extremely flexible, least cost peaking resources and, therefore, the adoption of alternative planning standards is not likely to affect the Company's resource portfolio. Exh. DTE 1-46; Exh. DTE 1-47. That is, it was extremely unlikely that the added costs of providing some minor refinement to the Company's planning standard analysis would translate to any cost or reliability benefit for customers. Accordingly, the Company maintained its approved planning standards.

B. Normal Year Standard

As stated, the Company's normal year standard is based upon the arithmetic average of historical degree day data. Based upon this method, the Company calculated a normal year standard of 7,057 degree days. Exh. BG-1, p. 33; Exh. DTE 1-43. The Department has previously accepted the use of the arithmetic average to establish a normal year standard, including in the Company's most recent forecast review. Berkshire Gas, D.T.E. 98-99, p. 8; see also Boston Gas Company, 25 DOMSC 116, p. 200 (1992). Accordingly, the Department should approve the Company's normal year planning standard of 7,057 degree days.

C. Design Day Standard

The Company maintained its design day planning standard of 75 degree days, while applying a 76 degree day for contingency purposes. As noted, the 75 degree day standard was derived from the once in 20 year's probability of occurrence. Exh. B-4, p. 11.

In maintaining this planning standard, the Company considered several factors. First, the Company noted that it experienced a design day of 76 degree days in 1994.

Exh. BG-1, p. 34. Second, the Company considered the flexibility and responsiveness of its resource portfolio.

Berkshire believes that its ability to respond to a design day of 76 degree days confirmed the flexibility and responsiveness of the Company's resource plan. The Company has worked to maintain this reliability and flexibility. For example, the Company continues to benefit from an extremely favorable contract with the operator of the U.S. Generating cogeneration facility, the Company's new liquefied natural gas ("LNG") facility in Whately and largely depreciated liquid propane ("L.P.") facilities. Exh. BG-1, pp. 34-36.

The Company acknowledges the importance of evaluating alternative planning standards for costs and benefit. Berkshire recognizes that some analyses may require the development of detailed estimates of the costs associated with unserved demand, which are typically substantial. Here, Berkshire recognized that it could not prudently plan for a design day below the statistically termed one-in-20 year probability standard, particularly given recent experience where more severe weather was experienced. Exh. BG-1, p. 36. In fact, planning for a higher standard, namely the recently experienced 76 degree day, may well be appropriate. Importantly, Berkshire recognized that its fixed costs or demand charges are not affected by planning for a particular design day standard. Berkshire is able to meet significantly higher peak day demands with only increased commodity-related costs. Accordingly, the Company recognized that it would not be appropriate to incur substantial costs to analyze unserved demand. Id. Simply put, Berkshire "cannot generate additional savings by

'planning' for lower design day standards nor is it incurring added costs for its high level of reliability." Id. at 38.[3]

The Company has secured appropriate resources that enable it to provide reliable service without additional fixed costs. The Company recognizes that more detailed analysis may be appropriate in the future, but that such efforts would not have secured benefits at this time. Berkshire is committed to regularly evaluating the continuing merits of its planning standards.

Accordingly, the Department should find that the Company's peak day planning standard is appropriate for resource planning.

D. Design Year Planning Standard

The Company's design year planning standard was developed in a manner similar to that applied in developing the design day standard. The Company adopted the one-in-30 year standard of 8,194 degree days. Exh. BG-4, p. 8. This standard was previously accepted by the Department, Berkshire Gas, D.T.E. 98-99, pp. 10-11. Berkshire also demonstrated that in 1978 it had experienced a design year of 8,336 degree days. Further, the Company explained that its comparative analyses had shown comparable probabilistic and actual degree day standards for other regional gas utilities. Exh. BG-1, p. 38. Further, the Company also recognized the same flexibility incorporated into the Company's resource plan resulted in greater reliability in meeting more extreme demand conditions while providing no meaningful cost saving opportunity for planning to an extremely low level of degree days, i.e., a one-in-20 year standard or less. Id.

[3] Berkshire concluded that even for "the most extreme scenarios," it would not be able to curtail service to most residential customers. Exh. BG-1, p. 37. The Company analyzed its ability to secure additional LNG supplies in the aftermath of the events of September, 2001. Berkshire believes that it implemented and executed an appropriate response plan and, therefore, continues to maintain a reliable resource plan. Id.

Accordingly, the Department should find that the Company's design year planning standard is appropriate for resource planning purposes.

E. Cold Snap Planning Standard

The Company explained how it developed a database reflecting a "rolling" 10-day average degree day total. Berkshire elected to continue to employ the one-in-30 year standard of 620 degree days that has been previously accepted by the Department. Berkshire Gas, D.T.E. 98-99, p. 37. (The one-in-20 year standard of 613 degree days was essentially identical). Exh. BG-1, p. 39. The Company noted that a recent cold snap in January 2000 confirmed the continuing validity of this standard. Finally, Berkshire recognized the substantial flexibility benefits incorporated within the resource plan and determined that significant reliability or cost benefit could not be secured through the application of an alternative cold snap standard for planning purposes. Id.

Accordingly, the Department should find that the Company's cold snap planning standard remains appropriate for purposes of resource planning.

F. Conclusion – Planning Standards

Berkshire has demonstrated that its previously approved planning standards remain reviewable, reliable and appropriate. These standards were based upon a sophisticated statistical analysis and the best available weather data. Recent actual experience and comparisons to standards from other utilities confirm the continuing appropriateness of these planning standards. Finally, the Company demonstrated that its optimized and flexible resource portfolio provides little, if any, opportunity for savings or reliability benefits if the Company planned to alternative standards. The Company indicated that it will likely update these standards in connection with its next forecast filing. Accordingly, the Company submits that the Department should approve the Company's planning standards.

V. ADEQUACY OF RESOURCE PORTFOLIO

A. Standard of Review

Pursuant to G.L. c. 164, §69I, the Department is required to ensure "a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost." The Department, in fulfilling this mandate, will review a gas company's supply planning process and two major aspects of the utility supply plan -- adequacy and cost. Berkshire Gas, D.T.E. 98-99, p. 24; Commonwealth Gas Company, D.P.U. 92-159, p. 53. Specifically, the Department reviews a gas company's five-year supply plan to determine whether the plan is "adequate to meet projected normal year, design year, design day and cold snap firm sendout requirements." Berkshire Gas, D.T.E. 98-99, pp. 24-25; Bay State Gas Company, D.P.U. 93-129 (1996). The Department requires that a gas company, in order to establish adequacy, must demonstrate that "it has an identified set of resources that meets its projected sendout under a reasonable range of contingencies". Id.[4]

The Department also reviews a gas company's overall supplying planning process. An appropriate supply planning process requires the development of an adequate, least-cost and low-environmental impact resource plan. Bay State, D.P.U. 93-129, p. 28; Berkshire Gas, D.T.E. 98-99, p. 25. A gas company must therefore establish that its supply planning process enables it to identify and evaluate a full range of resource options and to compare all such options on an equal basis. Id. The Department also reviews whether a gas company's five-year supply plan minimizes cost. A least cost supply plan is "one that minimizes costs subject to tradeoffs with

[4] If a company cannot establish that it has an identified set of resources which meet sendout requirements under such reasonable contingencies, the company must then demonstrate that it has an action plan which meets projected sendout in the event that the identified resources will not be available when expected. Berkshire Gas, D.T.E. 98-99, p. 25.

adequacy and environmental impact." Id. As demonstrated in the Company's analysis, Berkshire's supply plan and planning process satisfy all of these Department standards.

B. Description of Berkshire Resources

The Company explained that its portfolio of firm pipeline-transported gas supply consists principally of three purchase contracts for domestically-produced gas and one purchase contract for Canadian-produced gas. Exh. DTE 1-76. The Company explained that the contracts with domestic suppliers provide for up to 10,553 MMBtus per day of firm supply. Exh. BG-1, p. 77.[5] The Company explained that these contracts expire in late 2002 but that the Company was completing a competitive solicitation for replacement resources consistent with the Department's directives in Berkshire Gas, D.T.E. 01-41. Exh. BG-1, pp. 77-78. The Company explained that its Canadian gas supply provides for up to 1,057 MMBtus per day. Exh. BG-1, p. 78.[6] The Company also explained that it purchases spot gas to lower its commodity cost, purchasing gas from marketers and, more recently, has secured gas cost savings through the alliance with BP Energy. Berkshire Gas, D.T.E. 01-41. The Company demonstrated that it has also sought to reduce pipeline gas costs from various optimization strategies for the benefit of its firm customers and has achieved substantial benefits for customers through the alliance. Exh. BG-1, pp. 45-49.[7]

Berkshire also explained that it maintains capacity entitlements for both "long haul" and "short haul" capacity used to transport gas from the gas production fields of the southwestern United States and the underground storage fields in Pennsylvania,

[5] The Company also explained that it was in the process of pursuing competitive solicitations for the renewal or replacement of these supply contracts. The Company expects to be filing for Department approval of new supply contracts to replace these existing resources in the near term.

[6] The Company has also pursued a competitive solicitation to address the termination of its Canadian supply contract. The Company anticipates submitting the agreement for such replacement for Department approval in the near term. Exh. DTE 1-96.

[7] The alliance has been proposed to be extended through March 31, 2004. The relevant agreements are being considered in docket D.T.E. 02-19.

New York and West Virginia, respectively. The Company's filing describes the transportation capacity maintained by Berkshire as well as recent adjustments to transportation contracts. Specifically, the Company maintains contractual rights for firm, long-haul transportation of 14,751 MMBtus per day and short-haul transportation capacity of 15,854 MMBtus per day. Exh. BG-1, p. 71; Exh. DTE 1-72. A third component of the Company's transportation capacity is the transportation agreement for 1,057 MMBtus per day between the Canadian border and the Company's service area. Id.

The Company also explained that it maintains storage service contracts as an essential tool in its cost minimalization strategy. Exh. DTE 1-86. These contracts provide substantial storage capacity with maximum daily withdrawal capacity of 15,857 MMBtus. Exh. BG-1, pp. 75-76.

The Company also maintains firm and interruptible transportation rights pursuant to a contract with the operator of the U.S. Generating plant in Pittsfield, Massachusetts. Pursuant to these contractual rights, Berkshire may also purchase up to 7,500 MMBtus per day of the plant's gas supply during the heating season. In addition, the Company may purchase up to 24,000 MMBtus of the plant's firm gas supply as a "surge protection service" in the event the Company's supplies are "pro-rated" or curtailed. Exh. BG-1, pp. 79-80. Importantly, these rights do not involve any demand charges. Id. At 80. The Company also explained that, during the heating season, its supply and storage volumes are supplemented by liquefied natural gas ("LNG") vaporized from its new Whately facility and propane dispatched from several propane air facilities located throughout the Company's service territory. The Company maintains a contract with Distrigas of Massachusetts Corporation for the delivery of up to 2,000 MMBtus per day of LNG. Exh. BG-1, p. 79. This LNG can be taken as liquid to be vaporized at the

Whately facility or as a displacement gas from the interstate pipeline that would be delivered to the Company's city gate. Id. The Company noted that these peak service rights have secured substantial reliability and cost savings for the benefit of the Company's customers.[8]

The Company maintains rates for firm transportation pursuant to recently revised unbundled rates. See The Berkshire Gas Company, D.T.E. 01-56 (2002). The Company noted that a number of customers had, consistent with the Company's support of the Department's unbundling initiative (Exh. DTE 1-92; Exh. DTE 1-140), migrated to transportation service and that, more recently, a new trend appeared to be emerging of "reverse migration." Exh. BG-1, pp. 27-29; Exh. DTE 1-146. The Company explained that it had devoted substantial effort to the promotion of a more competitive market and customer choice in the Massachusetts natural gas industry in response to the Department's decision in docket D.T.E. 98-32. The Company's new forecasting techniques will enhance the Company's ability to respond to these market changes.

The Company described that it has long maintained effective conservation and load management ("C&LM") programs and evaluated these resources on an equal basis with supply resources. Exh. BG-1, p. 10. The Company's C&LM programs have secured substantial savings and other benefits for customers. The Company has designed its C&LM program in collaborative processes with the Attorney General and the Department in a number of separate Department proceedings. The Company enjoys a strong working relationship with local community action program agencies and has achieved substantial penetration of its programs in the low income community. Berkshire explained that it has provided energy audits to over 10,000 residential

[8] The Company explained that in response to the recent natural gas price spike, the LNG facility was able to secure additional economic benefits for the benefit of customers. Exh. BG-1, p. 82.

customers and installed measures at nearly 5,000 residential customers and for 1,000 commercial and industrial customers. RR-D.T.E. 1. The Company explained that the conservation programs have contributed to its ability to defer necessary capital investments, particularly in its Greenfield Division. Exh. BG-1, p. 11. More recently, consistent with Department directives, the Company has moved to market transformation programs. Exh. DTE 1-90. Finally, the Company explained that it has long maintained a Load Management Rate with its largest customer, the University of Massachusetts at Amherst. Exh. BG-1, p. 82. Berkshire explained that it may interrupt service to the University up to 15 days during the peak period. Id. Exh. DTE 1-121. Berkshire also again explained that this rate has secured substantial benefits for customers by enabling the Company to defer the need for a new energy facility in the Greenfield Division for a number of years. Id.

C. The Company's Resource Portfolio is Adequate to Meet a Range of Projected Sendout Requirements

The Company's requirements, base case scenario is intended to represent its most probable demand requirements. The Company also recognizes that customer demand may vary substantially as a result of changing circumstances, including weather. Therefore, the Company has sought to develop a resource plan that provides a substantial degree of flexibility to adjust to changing economic, market or weather conditions while ensuring that adequate resources are available (often at no additional costs to customers) to meet customer requirements under design conditions. As the record has demonstrated, Berkshire's resource plan currently provides flexibility to meet all relevant planning requirements on a reliable basis. Accordingly, the Department should find that Berkshire has demonstrated that its resource plan is adequate to meet projected normal year, design year, design day and cold snap sendout requirements.

The Company's resource portfolio analysis for sales customers under a normal scenario for the split years ending 2005-2006 is shown in Tables G22N and G22NH. See also Exh. DTE 1-147. This analysis demonstrates the adequacy of the Company's supply resources in responding to normal demand requirements. The Company demonstrated that it has also considered the appropriate degree of customer migration that will continue to occur during the forecast period. Exh. BG-1, p. 65. The Company explained that this continuing migration is reflected in the tables through the slight reduction in assets previously held by the Company that are now assigned to marketers. Id. The Company also explained that its new LNG facility has enabled the Company to address the reliability concern that it had shown in its previous Forecast and Supply Plan filing with the Department such that the Company is now able to maintain the integrity and reliability of its distribution system in the Greenfield Division.

In terms of a design year analysis, the Company's analysis for sales customers under a design year scenario for the period ending in split year 2005-2006 is shown in Tables G22D and G22DH. See also Exh. DTE 1-147. These tables demonstrate the adequacy of the Company's supply resources in meeting design year demand. Exh. BG-1, p. 65. As noted above, the LNG facility gives the Company a high level of reliability and flexibility in the Greenfield Division that was not available at the time of its last Forecast and Supply Plan filing. The additional peaking resources available to the Company (U.S. Generating contract rights, Distrigas of Massachusetts, LNG Vapor, L.P. vaporization and load management) provide Berkshire with the ability to meet its sendout requirements during a design year. Id. Accordingly, the Department should find that the Company has demonstrated that it maintains an adequate resource plan to meet design year requirements.

The Company also adopted a statistically derived cold snap standard of 620 degree days over a ten day period. The Company explained that it would meet the firm customer requirements during this period of extreme cold by dispatching its full portfolio of pipeline supply volumes. Exh. BG-1, pp. 66-67. Berkshire also indicated that it would supplement those supplies with vaporized LNG from its Whately facility as well as L.P. dispatched from its various satellite production facilities. Berkshire explained that its ample L.P. and LNG storage, production capability and contract and relationship with U.S. Generating has provided adequate cold snap volumes and capabilities for the benefit of its firm customers. The Company explained that the recent addition of the LNG storage and vaporization facility had now addressed its previous reliability concerns for that Division in a least cost manner. Id.; Exh. DTE 1-108; Exh. DTE 1-120. In sum, the Company explained that it had implemented an adequate resource plan in order to ensure reliable service during an extended cold snap.

Finally, the Company demonstrated that it had substantial facilities necessary to ensure reliable service under peak day sendout requirements throughout the forecast period. Table G23 demonstrated that the substantial flexibility associated with the Pittsfield Generating contract, the Company's substantial storage and production capabilities, its load management resources and ability to dispatch L.P. provided a substantial, least cost resource plan sufficient to provide reliable service under peak day sendout requirements. Importantly, these resources are available when needed but most costs associated with these resources are only incurred when they are "dispatched." Exh. BG-1, Table G23; Exh. DTE 1-116; Exh. DTE 1-117. Thus, the Company has creatively balanced reliability and cost considerations. Accordingly, the Department should find that the Company has satisfied the relevant standards with respect to the adequacy of its supply plan during a peak day.

D. Berkshire's Supply Planning Process Enables the Company to Identify and Evaluate a Full Range of Resource Options

As the Company demonstrated, Berkshire implements a resource planning process that enables it to analyze the need for additional resources, identify new resource options and evaluate resource planning decisions in the context of changing circumstances. Berkshire, therefore, is able to implement a supply planning process that facilitates the development of a resource plan that provides a reliable supply of gas that is least cost and that has a minimal impact upon the environment. The Company's forecast of its firm sendout requirements serves as the basis for designing the Company's resource portfolio. Exh. BG-1, p. 41. Berkshire explained that, like most gas distribution companies in Massachusetts, the resources needed to meet the typical loads experienced on the system are either base, seasonal or peaking. Berkshire has perhaps the most severe weather patterns in its service territory within the state.

The Company continually monitors and evaluates its resource plan. The Company's current resource plan is a result of its ongoing efforts to satisfy its public service obligations and to pursue a least cost supply strategy. Berkshire noted that this strategy involved seeking to minimize short term costs while maintaining long term supply security and economies, including the availability of peak period supplies. Accordingly, on a daily, weekly and monthly basis, the Company evaluates its resource requirements and secures additional assets required to serve customers (or releases those assets not required to service this market and basically returns any value received for those assets to its firm customers). Berkshire explained that recently it has accomplished its short-term portfolio optimization savings through the Company's alliance relationship with BP Energy Company and the other Energy East local distribution companies. Exh. BG-1, p. 42; The Berkshire Gas Company, D.T.E. 02-19.

Berkshire explained that longer term resources requirements are generally addressed twice per year and that further analysis will be performed when mandated by particular market conditions or change in circumstances. Berkshire recognizes the dynamic nature of supply availability and price changes in seeking to develop a long-term supply plan that achieves a proper balance of the overall Company goals. As part of this effort, Berkshire monitors and analyzes all major projects that are likely to affect gas availability in the region. See Exh. BG-1, pp. 50-52; Exh. DTE 1-66; Exh. DTE 1-70. Whenever possible, Berkshire seeks to reflect the benefits of diversification of supply resources, the maintenance and operation of a sound distribution system as well as to provide for future demonstrated customer demand. Exh. DTE 1-71. The Company has also sought to respond to changing market and regulatory conditions, including migration and potential reverse migration as a result of the Department's initiative to unbundle the gas market within Massachusetts. Berkshire has made specific refinements to its supply portfolio through the negotiation or termination of specific supply or transportation resources. For example, in 1999 the Company completed several supply and transportation contract revisions that enabled the Company to avoid annual charges of nearly $1 million and positioned the Company to be able to respond to regulatory changes that may be implemented upon the termination of the transition period established in D.T.E. 98-32. Exh. BG-1, pp. 54-59. In sum, the evidence demonstrates the Company's overall supply planning process, as well as the specific implication of that process, has resulted in substantial benefits for customers.

Accordingly, the Department should find that Berkshire's resource planning processes are appropriate and result in the addition of any necessary resources through procedures, including the employment of appropriate competitive solicitations. See e.g.,

Exh. DTE 1-96. Berkshire also maintains an established process to identify and evaluate C&LM programs on an equal basis with other resources. Indeed, C&LM resources have been an integral component of the Company's resource plan for many years. Accordingly, the Department should find that the Company has appropriately incorporated both supply-side and demand-side resource options in its resource mix.

VI. CONCLUSION

The Company has demonstrated that its sales and sendout forecasts are reviewable, reliable and appropriate. In addition, the Company has shown that it maintains adequate resources to meet firm sendout requirements throughout the forecast period. Further, the Company has explained that its supply planning process enables it to identify a reasonable range of resource options and to perform adequate evaluations of these options. The Company's supply planning process enables Berkshire to make least-cost planning decisions that contribute to a least-cost resource plan. Accordingly, the Department should approve the Forecast and Supply Plan of the Company.

Respectfully submitted,

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